

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for managing at least one welding consumable ~~consumable(s)~~, comprising:
 - a welder, comprising:
 - a consumables ~~consumable(s)~~ monitor that monitors an amount of at least one consumable consumed ~~transmits welding consumable(s) information that includes an indication of ownership of a welding consumable(s); and~~
 - an arc/weld quality monitor that monitors quality of at least one weld; and
 - a remote system ~~that interfaces~~ communicatively coupled to the welder ~~via a computer network,~~ the remote system comprising at least one of:
 - a production control component that receives information from the consumables monitor regarding the amount of the at least one consumable consumed or the amount of the at least one consumable remaining and measures a consumable demand rate based at least in part upon a production control policy and the received information;
 - a financial account component that receives information from the consumables monitor regarding the amount of the at least one consumable consumed or the amount of the at least one consumable remaining and performs accounting tasks based at least in part upon the received information; or
 - a materials management component that receives information from the consumables monitor regarding the amount of the at least one consumable consumed or the amount of the at least one consumable remaining and performs inventory control based at least in part upon the received information.
 - facilitates management of welding consumable(s) for the welder based at least in part upon information received from the consumable(s) monitor.

2. (Currently Amended) The system of claim 1, the inventory control includes remote system facilitates ordering ~~and/or or~~ purchasing of ~~a the~~ at least one consumable based at least in part upon the information received from the consumables consumable(s) monitor.
3. (Currently Amended) The system of claim ~~[[2]]~~ 1, the at least one consumable is at least one of: wire, gas, flux, contact tip ~~[[and]]~~ or consumable electrode.
4. (Currently Amended) The system of claim 3, the wire is used for at least one of gas metal arc welding, flux cored arc welding, metal cored arc welding, submerged arc welding, narrow groove welding, hot wire filled TIG welding, cold wire filled TIG welding, plasma arc welding, electron beam and laser welding, ~~[[and]]~~ or hardface welding.
5. (Currently Amended) The system of claim 3, the consumable electrode is used for at least one of: arc gauging ~~[[and]]~~ or manual shielded arc welding.
6. (Currently Amended) The system of claim ~~[[2]]~~ 1, the inventory control ordering and/or purchasing of the consumable is further based at least in part upon an customer ordering model stored on the remote system.
7. (Currently Amended) The system of claim ~~[[2]]~~ 1, the inventory control ordering and/or purchasing of the consumable is further based at least in part upon a vendor managed replenishment contract.
8. (Currently Amended) The system of claim 7, ownership of the at least one consumable consumable(s) remains with a supplier, distributor ~~or and/or~~ manufacturer until the at least one consumable consumable(s) has been used by a customer.
9. (Currently Amended) The system of claim 1, the welder is leased to a customer and enforcement of the lease is performed at least in part based upon information received from the consumables consumable(s) monitor.

10. (Currently Amended) The system of claim 1, the remote system enforces at least one of: a welding equipment maintenance contract, a ~~[[and]]~~ welding software maintenance contract, a welding service contract, or a welding upgrade contract, ~~and terms that a maintenance fee is waived or reduced if order and usage requirement of welding consumable(s) is met.~~

11. (Currently Amended) The system of claim 1 ~~a customer is invoiced by~~ the remote system produces an invoice for the at least one consumable consumable(s) based at least in part upon the information received from the consumable(s) monitor.

12. (Currently Amended) The system of claim 1, the network employs at least one of: Ethernet, Wireless Ethernet, PPP (point-to-point protocol), point-to-multipoint short-range RF (Radio Frequency), WAP (Wireless Application Protocol), Bluetooth, IP, IPv6, TCP, User Datagram Protocol (UDP), PPTP (Point-to-Point Tunneling Protocol), L2TP (Layer Two Tunneling Protocol), IPsec (Internet Protocol Security) ~~[[and]]~~ or SOCKS.

13. (Currently Amended) The system of claim 1, information ~~exchanged between the welder and the remote system~~ includes at least one of: HTML, SHTML, VB Script, JAVA, CGI Script, JAVA Script, dynamic HTML, ASP, ActiveX, XML, PDF, EDI and WML format.

14. (Currently Amended) The system of claim 1, the welder and the remote system are communicatively coupled via further comprising at least one of: a LAN, a phone connection ~~[[and]]~~ or a gateway ~~to couple the welder and/or the remote system to the network.~~

15. (Currently Amended) The system of claim 1, the network is welder interfaces to the remote system via at least one of: a local computer network, an extranet ~~[[and]]~~ or the Internet.

16. (Cancelled)

17. (Currently Amended) The system of claim ~~[[16]]~~ 1, ~~a customer is invoiced by~~ the remote system generates an invoice for the at least one consumable consumable(s) based at least in part upon information regarding weld quality received from the arc/weld quality monitor.

18. (Currently Amended) The system of claim 17, the remote system tracks patterns of usage of the at least one consumable welding consumable(s) or and/or inventory levels of the at least one consumable welding consumable(s) inventory level(s).
19. (Currently Amended) The system of claim 17, the remote system facilitates Just-In-Time (JIT) ~~welding consumable(s)~~ raw material inventory management to achieve low inventory of the at least one consumable or and/or high service level objectives in production.
20. (Currently Amended) The system of claim 1, the remote system, ~~at least based in part upon information received from the consumable(s) monitor,~~ performs at least one of: enterprise resource planning, production capacity planning or and/or welding consumable(s) forecast planning based at least in part upon the information by a welding consumable(s) manufacturer, distributor and/or supplier.
21. (Currently Amended) A system for managing at least one welding consumable consumable(s), comprising:
a welder comprising:
a ~~consumable(s)~~ consumables monitor that monitors consumption of at least one sends welding consumable and sends a first information regarding the consumption consumable(s) information; and
an arc welding component that monitors the quality of welds produced by the welder and sends a second information regarding the quality;
a local system operatively coupled to the welder *via* a first ~~computer~~ network, the local system ~~facilitates management of orders the at least one welding consumable consumable(s)~~ for the welder based at least in part upon the first information received from the ~~consumable(s) consumables monitor;~~ and
a remote system operatively coupled to the welder *via* a second network, the remote system receives the first information regarding the consumption and the second information regarding the quality and produces an invoice for the at least one welding consumable that has been consumed and that has produced a quality weld.

22. (Cancelled)
23. (Currently Amended) The system of claim [[22]] 21, the second network is at least one of: a local computer network, an extranet [[and]] or the Internet.
24. (Currently Amended) The system of claim [[22]] 21, the local system initiates orders from the remote system based at least in part upon information received from the consumables ~~consumable(s)~~ monitor.
25. (Currently Amended) The system of claim [[24]] 21, the at least one consumable is at least one of: wire, gas, flux, contact tip [[and]] or consumable electrode.
26. (Currently Amended) The system of claim 25, the wire is used for at least one of: gas metal arc welding, flux cored arc welding, metal cored arc welding, submerged arc welding, narrow groove welding, hot wire filled TIG welding, cold wire filled TIG welding, plasma arc welding, electron beam and laser welding, [[and]] or hardface welding.
27. (Currently Amended) The system of claim 25, the consumable electrode is used for at least one of: arc gauging [[and]] or manual shielded arc welding.
28. (Currently Amended) The system of claim 21, the local system further comprises at least one of:
a production control system that performs at least one of: production capacity planning or forecast planning based at least in part upon the information received from the consumables monitor,
a financial accounting system that performs accounting tasks based at least in part upon the information received from the consumables monitor and or
a materials management system that performs inventory management or inventory procurement based at least in part upon the information received from the consumables monitor.
- 29-31. (Cancelled)

32. (Currently Amended) The system of claim 21, the first network is at least one of: a local computer network, an extranet ~~[[and]]~~ or the Internet.

33. (Currently Amended) The system of claim 21, the first network or ~~and/or~~ the second network employs at least one of Ethernet, Wireless Ethernet, PPP (point-to-point protocol), point-to-multipoint short-range RF (Radio Frequency), WAP (Wireless Application Protocol), Bluetooth, IP, IPv6, TCP, User Datagram Protocol (UDP), PPTP (Point-to-Point Tunneling Protocol), L2TP (Layer Two Tunneling Protocol), IPsec (Internet Protocol Security) ~~[[and]]~~ or SOCKS.

34. (Currently Amended) The system of claim 21, information exchanged between the welder and the local system includes at least one of HTML, SHTML, VB Script, JAVA, CGI Script, JAVA Script, dynamic HTML, ASP, ActiveX, XML, PDF, EDI ~~[[and]]~~ or WML format.

35-37. (Cancelled)

38. (Currently Amended) A system for managing welding consumables ~~consumable(s)~~, comprising:

a welder, comprising a consumable monitor component that monitors consumable usage of at least one and/or consumable status of a by the welder; and that further monitors ownership of a consumable;

a customer component that interfaces with the consumable monitor, the customer component orders the at least one consumable to facilitate welding resource management based at least in part upon information regarding usage of the at least one consumable usage and/or consumable status received from the consumable monitor component; and

a supplier component that receives the order information from the customer component and processes the order to facilitate purchasing and/or ordering of welding consumable(s); and wherein memory operatively coupled to a processor is capable of retention of at least one piece of information that pertains to the consumable monitor component, the customer component, or the supplier component.

39. (Currently Amended) The system of claim 38, the customer component further comprises at least one of: a production control component, a financial accounting component [[and]] or a materials management component.

40. (Currently Amended) The system of claim 38, the consumable monitored by the consumable monitor component is at least one of: wire, gas, flux, contact tip [[and]] or consumable electrode.

41. (Currently Amended) The system of claim 40, the wire is used for at least one of gas metal arc welding, flux cored arc welding, metal cored arc welding, submerged arc welding, narrow groove welding, hot wire filled TIG welding, cold wire filled TIG welding, plasma arc welding, electron beam and laser welding, [[and]] or hardface welding.

42. (Currently Amended) The system of claim 40, the consumable electrode is used for at least one of arc gauging [[and]] or manual shielded arc welding.

43. (Currently Amended) A system for managing welding consumables consumable(s), comprising:

a welder, comprising a consumable monitor component that monitors consumable usage or and/or consumable status of at least one consumable a welder, and that further monitors ownership of a consumable;

an aggregation component that aggregates information regarding the for aggregating consumable usage or the status of the at least one consumable into aggregated welding consumable data, wherein the information is received that receives welding information from the consumable monitor;

an inventory replenishment component that initiates replenishment of the at least one consumable based at least in part upon the aggregated welding consumable data receives information from the aggregation component;

a procurement management component that determines receives information from the aggregation component and to determine, at least based in part upon inventory data, forecast data and/or information associated with a vendor managed replenishment contract, whether to initiate reordering of the consumable based at least in part upon a vendor managed replenishment contract and the aggregated welding consumable data;

a reorder proposal component that generates for generating a reorder proposal for the at least one consumable once the procurement management component has initiated reordering of the consumable;

an authorization component that receives authorization for the reorder proposal received from the reorder proposal component;

a reorder transmittal component that transmits for transmitting a consumable reorder an order for the at least one consumable based at least in part upon the reorder proposal; and

a supplier component that processes the order and initiates an order confirmation invoice acknowledging the order. receives the consumable reorder to facilitate purchasing and/or ordering of welding consumable(s); and

wherein memory operatively coupled to a processor is capable of retention of at least one piece of information that pertains to one of the aforementioned components.

44. (Currently Amended) The system of claim 43, the order for the at least one consumable ~~reorder~~ is transmitted by the reorder transmittal component *via* EDI or XML.

45. (Currently Amended) A method for managing welding consumables ~~consumable(s)~~, comprising:

employing a processor to execute computer readable instructions stored in a computer readable medium to perform the following acts:

receiving information ~~from a consumable(s) monitor via a computer network~~ regarding ~~consumable~~ usage of at least one welding consumable ~~a welder and ownership of consumables consumed by the welder;~~

determining whether supply of each of the at least one ~~[[a]]~~ welding consumable has fallen below a predefined ordering threshold amount based at least in part on the information regarding usage of each of the at least one welding consumable; and

ordering each of the at least one welding consumable based at least in part upon the determination that the supply of each of the at least one welding consumable has fallen below the predefined ordering threshold information received regarding the consumable usage and ownership.

46. (Currently Amended) The method of claim 45, further comprising aggregating information regarding the ~~consumable~~ usage of each of the at least one welding consumable from one or more welders.

47. (Currently Amended) The method of claim 45, further comprising aggregating information regarding the ~~consumable~~ ordering of each of the at least one consumable.

48. (Currently Amended) A method for managing welding ~~consumables~~ consumable(s), comprising:

employing a processor to execute computer readable instructions stored in a computer readable medium to perform the following acts:

receiving a first information ~~from a consumable(s) monitor associated with a welder via a computer network~~ regarding usage of at least one welding consumable usage and welding consumable ownership; and

receiving a second information regarding weld quality;

generating an invoice ~~invoicing a customer~~ for the at least one welding consumable based at least in part upon the first information ~~received~~ regarding the consumable usage of the at least one welding consumable and the second information regarding weld quality, wherein the invoice contains charges for an amount of the at least one welding consumable used to produce quality welds.

49. (Cancelled)

50. (Currently Amended) A method for managing welding ~~consumables~~ consumable(s), comprising:

employing a processor to execute computer readable instructions stored in a computer readable medium to perform the following acts:

~~receiving information from a consumable(s) monitor associated with a welder via a computer network regarding usage and ownership of a welding consumable;~~

aggregating the information regarding usage of the welding consumable from one or more welders;

~~obtaining information regarding~~ determining an inventory level of the welding consumable based at least in part on the aggregated information;

~~obtaining information regarding a welding vendor managed replenishment contract;~~

~~comparing~~ determining whether the inventory level of the welding consumable has fallen below to a threshold ordering level;

initiating an order if the inventory level of the welding consumable is less than the threshold ordering level;

obtaining authorization for the order; and

transmitting [[a]] the order ~~reorder of the welding consumable.~~

51. (Cancelled)

52. (Currently Amended) The method of claim 50, ~~the act of determining whether the inventory level has fallen below~~ the threshold ordering level is based at least in part upon at least one of: ~~a information provided in the a vendor managed replenishment contract, a supplier's lead time for the consumable, a consumable forecast usage rate, consumable availability of the consumable or and consumable pricing data~~ for the consumable.

53. (Currently Amended) The method of claim 50, the threshold ordering level is updated continuously and in real-time ~~from aggregated welding consumable(s) data, supplier's lead time for the consumable, availability of the consumable and /or consumable pricing data.~~

54-57. (Cancelled)

58. (Currently Amended) The system of claim 1, the remote system charges for the at least one component~~an operator of the welder for welding consumable(s)~~ as ~~they are~~ the at least one component is used by the welder based at least in part upon the quality of the at least one weld.

59. (New) The system of claim 1, the remote system maintains data regarding an inventory of the at least one consumable at a customer location, adjusts the inventory based at least in part on the information received from the consumables monitor regarding the amount of the at least one consumable consumed or the amount of the at least one consumable remaining and charges the customer for an amount of the at least one welding consumable used by the customer based at least in part upon the change in inventory.

60. (New) The system of claim 59, ownership of the at least one consumable remains with a supplier until the at least one consumable is used by the customer.